

### **REMARKS**

The Examiner has rejected claims 7 and 8 under 35 U.S.C. § 103(a) as being unpatentable over Jackson, Jr. U.S. Patent No. 4,386,979 in view of Niles U.S. Patent No. 3,929,530. Claims 9-12 have been rejected under § 103(a) as being unpatentable over Boyer U.S. Patent No. 2,981,616 in view of Lundstrom et al. U.S. Patent No. 4,370,181.

With respect to the rejection of claims 7 and 8 over Jackson, Jr. in view of Niles, claim 7 is amended herein to recite only the compound (a) group, namely tetrazole or tetrazole derivatives of formulae IA or IB. Jackson, Jr. and Niles do not teach or suggest the claimed fuel component. Therefore, it is requested that the rejection of claims 7 and 8 over Jackson, Jr. in view of Niles be withdrawn. Claim 7 is also amended to recite specific cooling agents and reducing agents, support for which may be found at page 9, line 13 to page 10, line 2 of the instant specification.

With respect to the rejection of claims 9-12 over Boyer in view of Lundstrom et al., Applicants respectfully traverse. Boyer discloses the use of azides, such as sodium azide, as the nitrogen fuel component, and an oxidizer selected from metal peroxides, inorganic perchlorates and metal nitrates. As stated in Col. 3, lines 21-29, "metal perchlorates and the metal peroxides are found to be particularly suited" and "compositions of this invention containing metal perchlorates as the oxidizing compounds are especially preferred because the perchlorates have very good stability against decomposition." Boyer fails to teach or suggest that sodium azide is toxic and that perchlorates lead to undesirable chlorine components in the reaction gases, as set forth in the background section of the instant application. More specifically, Boyer does not teach or suggest a composition that precludes sodium azide and perchlorates.

Lundstrom et al. do recognize that sodium azide is toxic, and also criticize past attempts to use tetrazole compounds with oxygen-containing oxidizers such as potassium perchlorate. See Col. 2, lines 4-13 and 35-44. To address the deficiencies in the prior art,

Lundstrom et al. disclose the combination of a tetrazole compound having no hydrogen in the molecule with an oxidizer containing no oxygen in the molecule (i.e., a non-oxygen containing oxidizer) to produce non-toxic products. Lundstrom et al.'s teaching of a tetrazole compound cannot be separated from its combination with a non-oxygen containing oxidizer because the reaction between the two is an essential aspect of that invention, namely the reaction by-products of that combination. Lundstrom et al. provide that examples of oxidizers include sulfur, molybdenum disulfide, chromium trichloride, etc. Hydrogen in the tetrazole compound must be avoided to avoid water as a by-product, which would then react with sulfur (or chlorine) from the oxidizer to produce hydrogen sulfide (or hydrogen chloride), which is toxic. Thus, considering the reference as a whole, Lundstrom et al. teach a specific combination of fuel component and oxidizer, and it is impermissible to pick and choose one or the other for combination with Boyer.

Boyer discloses metal peroxides (oxygen-containing), inorganic perchlorates (oxygen-containing), and metal nitrates (oxygen-containing) as the suitable oxidizers. Examiner suggests combining Lundstrom et al.'s tetrazole compound with Boyer's oxidizer to arrive at the claimed invention. However, to combine the tetrazole with the metal peroxides, inorganic perchlorates and/or metal nitrates as Examiner suggests is against the teaching of Lundstrom et al. to only use a non-oxygen containing oxidizer. Combination with the perchlorates is also outside the scope of claims 9-12. Thus, one skilled in the art would not be motivated to make the modification suggested by Examiner when viewing the references as a whole and/or the modification would not result in the claimed invention. Therefore, there is no *prima facie* obviousness.

Claims 9-12 of the instant application combine a tetrazole or a tetrazole derivative with a peroxide (alone or in combination with a nitrate), and peroxide by definition contains oxygen (nitrate by definition also contains oxygen). To arrive at the claimed invention would require picking and choosing elements of the prior art and piecing them together without regard to the teachings of the references as a whole, which is impermissible. Applicants therefore

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respectfully request withdrawal of the rejection claims 9-12 over Boyer in view of Lundstrom et al.

In view of the foregoing amendments to the claims and remarks given herein, Applicants respectfully believe this case is in condition for allowance and respectfully request allowance of the pending claims. If the Examiner believes any detailed language of the claims requires further discussion, the Examiner is respectfully asked to telephone the undersigned attorney so that the matter may be promptly resolved. The Examiner's prompt attention to this matter is appreciated.

Applicants are of the opinion that no additional excess claims fee is due as a result of this Amendment. A fee of \$120 for a 1-month extension of time is due as a result of this filing, and Applicant hereby petitions for that extension. Payment of all charges due for this filing is made on the attached Electronic Fee Sheet. If any additional charges or credits are necessary to complete this communication, please apply them to Deposit Account No. 23-3000.

Respectfully submitted,

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